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ABSTRACT

This report aims to encourage the wider use of target setting for individual students and trainees in the learning and skills sector, defined as the provision of post-16 further and continuing education and training, funded and inspected in England by the new Learning and Skills Council. Section 1 addresses types of targets for individual students that will be specific, challenging, achievable, and measurable. Section 2 offers a rationale for setting targets. Section 3 focuses on the crucial question of who targets are for--who will gain most from using targets and which types of learner will benefit most from targets. Section 4 describes these three models available for target setting: quantitative, qualitative, and combined (implicit and integrated). Section 5 addresses which approach is best for which learners. Section 6 identifies key features of successful target setting: implementation, learner motivation, teaching and tutoring, management, quantitative approaches, and qualitative and combined approaches. Section 7 is a guide to further resources. (Contains 33 references.) (YLB)

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Great expectations:

setting targets for students

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Feedback should be sent to
Information Services,
Learning and Skills Development Agency,
3 Citadel Place, Tinworth Street, London SE11 5EF
Tel 020 7962 1066 Fax 020 7840 5401
www.LSagency.org.uk

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Raising Quality and Achievement Programme
Run by the Learning and Skills Development Agency
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- We aim to reach all colleges and all levels of staff.
- We offer extra support to colleges that are receiving Standards Fund money to improve their practice.
- All our activity themes are backed by a programme of research and evaluation.
- The Raising Quality and Achievement Programme is sponsored by the DfEE and all activities are subsidised.

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Introduction

This report aims to encourage the wider use of target setting for individual students and trainees in the learning and skills sector.

The learning and skills sector is defined here as the provision of post-16 further and continuing education and training, funded and inspected in England by the new Learning and Skills Council. The experience and evidence on which this report is based are drawn primarily from English sources, but the principles and much of the operational detail also apply in the post-compulsory sectors in Scotland, Wales and Northern Ireland.

The main focus of this report is the creation of individual targets for learners in the learning and skills sector, including those taking A-levels or Scottish Highers, technical certificates, vocational qualifications or Access courses. As part of the general discussion about target setting processes, this report also addresses the formative aspects of value added. Formatively, the emphasis is on creating targets that enhance student learning, rather than using value added calculations to compare institutional or departmental performance. In this sense, target setting is about process rather than measurement.

Targets play an increasing role in many national policy agendas. Target setting associated with value added systems (e.g. for A-levels and Scottish Highers) has moved from a minority experimental activity to become mainstream. Indeed, new inspection arrangements for England explicitly anticipate greater use of value added measures.

What types of target are we talking about?

The focus of this report is the process of setting targets for individual students. At the risk of stating the obvious, such targets will be:

- specific
- challenging
- achievable
- measurable.

The literature on which these descriptions are based is summarised by Coe (2000). Targets expressed in this way may appear to be entirely straightforward, but substantial anecdotal and case study evidence suggests that they can be problematic.

Setting targets in this context involves identifying a number of actions at a level of detail that is appropriate not only to the learning task, but also to the individual student. This requires a high level of knowledge, diagnostic skill and understanding on the part of the teacher, tutor or trainer, not only of the learning task but also of the individual student and the subject.

For targets to be both challenging and achievable it is important to consider the process of teaching and learning. Targets need to be negotiated and agreed with the tutor but owned by the learner. This ownership has cognitive, emotional and motivating elements. Without challenge, learners will not be able to achieve to the best of their abilities. If the targets are not achievable, demoralisation and disengagement will follow.

Managing the relationship between challenge and achievability for the individual student or trainee demands a high degree of skill and professional expertise on the part of the tutor. Targets will generally be expressed as minimum or minimum-acceptable targets. They will be kept under review and may be raised in the light of coursework or unit assessments. Tutors will therefore need to approach this as an ongoing process, rather than a once-and-for-all event.

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Targets need to be measurable so that both learners and teachers can monitor and review progress. There are two specific problems with this. Firstly, there is a tendency to use targets that can be easily measured, rather than those that are actually worth measuring. Secondly, the measuring procedure itself may substitute for learning. If the criteria used are too time-consuming to monitor, track and record, then there will be less time available for learning – not to mention possible demotivational consequences for both educators and learners.

Other problems with target setting include:

- variable or poor tutoring practices in colleges and training providers
- poor or inadequate provision of feedback – which implies an absence of meaningful targets, as explained on page 1
- difficulties around the introduction of action planning, for both students and teachers
- poor rates of completion in some work-based learning programmes
- evidence linking low achievement by some learners to low expectations of teachers and trainers
- feedback to learners that aims to encourage, rather than provide specific guidance on improvement.

In terms of content, the targets discussed in this report will be expressed in one or more of four dimensions:

- grade achievement in assessments
- attainment of outcomes expressed in terms of competencies
- timing and sequencing of attainment
- underpinning processes.

The relative importance of these different dimensions will vary, depending on the type of learning and qualifications being pursued. This is discussed further in the section *What target setting models are available?* (page 6).

Why bother with targets at all?

If the process of setting targets is as complicated as is suggested here, why bother? This is a substantial point. Most learners already have a general target, such as achieving a given qualification, competency outcome or skill; or accumulating a given number of credits. If learners have been recruited and selected with integrity, there must already be an assumption that they will achieve their target. Looking at the substantial investment in effort and time required to implement target setting, we must ask if it is worthwhile.

The best argument for implementing target setting processes is that they work. The evidence for this comes from two main types of research – large-scale international reviews of educational research on effective teaching and small-scale case studies mainly from England.

In particular, the large-scale studies emphasise the importance of:

- interventions that impact directly on the experience of learners (Wang *et al.* 1993)
- ongoing reviews and feedback on student progress associated with remedial actions (Creemers 1994; Bosker and Scheerens 1997)
- high teacher expectations of students (Bosker and Scheerens 1997)
- formative assessment (Black and Wiliam 1998).

A number of English colleges are involved in a programme of action research to improve student retention or achievement, or both. Many of these projects have used the setting of minimum target grades as the focus of their improvement work. Case studies from this action research are published on the raising quality and achievement website (www.rqa.org.uk, see *Development Projects*) developed by the Learning and Skills Development Agency (formerly FEDA) in collaboration with the Association of Colleges.

All the colleges involved attributed improvements in retention and achievement to their target setting initiatives, which often form part of formative approaches to value added for A-level students. Case studies have been prepared by a wide range of quite different colleges operating in four major contexts: inner city, small town, suburban or rural. Sixth form colleges that have produced case studies focusing on target setting and/or formative assessment include:

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Bolton, Carmel, Greenhead, Richard Huish, Shrewsbury, Sir George Monoux, Stoke on Trent and Winstanley. FE and tertiary colleges that have produced similar case studies include: Accrington and Rossendale, Doncaster, Exeter, Middlesbrough, North Hertfordshire and Sutton Coldfield.

The numerous objections to the introduction of target setting can be grouped into six main areas:

- *discrimination*: realistic targets for lower attaining learners will be demotivating and may actually lead to lower achievement and even withdrawal
- *self-fulfilling prophecies*: students with low targets will work down to their teachers' low expectations
- *scepticism and disbelief*: the outcomes of learning are so individual that target setting is impractical and/or outcomes cannot be predicted with a sufficient degree of precision or within specified timescales to permit target setting
- *impracticality*: the outcomes of learning are influenced by so many external factors (social, employment, domestic etc) that the creation of targets is pointless
- *loss of professional discretion*: the setting of targets will lead to ever greater managerial control of teachers and trainers, and the blaming and scapegoating of those whose students do not achieve their targets
- *reductionism*: targets imply a narrowing of the many and varied purposes of learning.

These objections have some validity but the evidence suggests that the outcomes of target setting more than justify the effort involved. In particular, formative target setting and feedback involving 'mastery learning' are exceptionally powerful cognitive and motivational tools for improving the learning of low attaining students (Black and Wiliam 1998). Mastery learning involves setting attainable and short-term learning objectives, regular testing, frequent feedback and individualised corrective help (Petty 1998).

The practicality of individual target setting has been demonstrated for quite diverse groups of students in post-16 education and training. Evidence of successful tutoring and value added systems for A-level students can be found in the case studies referred to above. Other case studies demonstrate improvements in colleges in both retention and achievement for vocational qualifications (e.g. the Sutton Coldfield case study at www.rqa.org.uk and James 2000).

The objection of impracticality is based on misconceptions about the nature of the targets themselves. They are not, and never can be, based on predictions that will always be accurate at all times for all learners. Individual, external and unforeseen events will inevitably intervene. The most reliable predictions (e.g. A-level grades derived from average GCSE point scores, and Highers from Standards in Scotland) have a probability of approximately 50%. This is an argument for acknowledging the tentative and imprecise nature of the target setting process, however, rather than abandoning it altogether.

Similarly, the objection concerning a possible infringement of professional discretion appears to be directed not at the principle of target setting, but at how managers actually use the data derived from target setting. In fact, numerous case studies suggest that target setting has led to significant improvements in learning outcomes when implemented sensitively and where the prevailing organisational ethos is one of professional trust and improvement, rather than 'naming and shaming' (Wang *et al.* 1993; Creemers 1994; Bosker and Scheerens 1997; Black and Wiliam 1998).

Reductionism is perhaps the most difficult objection to address. We have argued elsewhere that the accreditation of learning is problematic for many adults (Martinez 2000). But there is also evidence to suggest that target setting benefits many adult students:

- the negotiation of intended learning outcomes (i.e. targets) and the review of progress towards such outcomes has been pioneered by the Workers' Educational Association with groups of adults who are often less than enthusiastic about formal qualifications (Foster *et al.* 1997; Astor 1995)
- in universities, within the context of learning contracts, the negotiation of targets has proved to be both effective and popular (Brennan and Little 1996; Brown and Baume 1992; Stephenson and Laycock 1993).

Who are targets for?

This crucial question can be broken down into two parts:

- Who will gain most from using targets?
- Which types of learner will benefit most from targets?

Who will gain most from using targets?

The evidence reviewed in the previous section indicates that target setting significantly improves student learning. Other case studies also suggest that it is highly beneficial to share the targets with the parents of 16–18-year-old students (see Winstanley College case study and others on www.rqa.org.uk).

The second most important group of users will be tutors, teachers and trainers. Case study evidence suggests that target setting processes that have led to significant improvements in student outcomes are associated with the review and adjustment of teaching and assessment practices, alongside curriculum change and innovation. In practice, this means that where targets have been exceeded, teachers and curriculum teams have been encouraged to reflect on their own experiences and share them within and between departments – sometimes across their college and increasingly with colleagues within the same subject or programme area from outside the college (a process supported in England by the DfEE Standards Fund).

Conversely, the under-achievement of targets has helped to identify issues for concern or a need for change in teaching practice, curriculum or assessment design.

With A-levels, for example, monitoring value added measures has allowed teachers to identify particular successes (and sometimes problems) regarding:

- student learning strategies and styles
- lower (or higher) ability students
- curriculum design
- teaching strategies
- assessment, marking schemes and feedback
- tutoring
- entry criteria
- learning support.

Comparisons between and within institutions have become increasingly significant for both institutional managers and national agencies. Value added calculations offer the opportunity to make more realistic like-for-like comparisons than are possible with raw exam scores.

Simply put, there is a strong correlation between A-level grades and average GCSE scores for 16–18 year olds. The extent to which targets based on average GCSE grades are achieved (leading to a residual of nil), overachieved (leading to a positive residual) or underachieved (leading to a negative residual) offers a meaningful way of comparing performance not only between institutions but also between individual departments, and even between teachers within departments.

Evidence from college case studies suggests that A-level target setting processes that have been sustained over a period of time can be used systematically to improve institutional performance. In this sense target setting provides both an improvement process and a means of measuring and comparing. To date, however, there is almost no equivalent experience outside A-levels and Highers in Scotland. Improvements in student performance in vocational qualifications have not generally employed target setting and have been measured by more conventional indicators such as attendance, retention and achievement rates.

As discussed in the section *What target setting models are available?* (page 6) there are a number of practical difficulties regarding the use of value added when making institutional comparisons. Primary among these is the much lower predictive power of average GCSE scores for GNVQs (and by inference other vocational qualifications). Although we have evidence that target setting helps to improve student outcomes, we do not yet possess a sufficiently robust method to permit value added calculations for qualifications other than A-levels and Scottish Highers.

Even A-level value added comparisons will have to be made with caution over the next 2–3 years. The recent changes in the structure of A-levels mean that value added data for 2000/02 will not be entirely comparable with that of previous years and we may have to wait some time to be able to make more reliable analyses. Equally, we do not yet know how student performance in key skills will relate to performance in academic and vocational A-levels. In conclusion, the targets discussed in this report are for:

- learners
- teachers, tutors and trainers
- the parents of younger learners
- curriculum managers
- institutional managers
- national agencies.

Which types of learner will benefit most from targets?

Target setting processes will be useful to all learners who wish to achieve a prescribed learning goal, whether that goal is expressed in terms of:

- examination grades, or
- defined competency outcomes.

This group includes students and trainers whose goal is an A-level, vocational qualification, Scottish Higher, technical certificate, Access courses, vocational A-level, GNVQ etc.

The target setting choices reviewed in the next section will be less relevant to students who are either:

- seeking a form of accreditation which is open to negotiation, or
- not seeking accreditation at all.

There are many target setting processes appropriate to the first group (usually described as learning contracts) and suggestions for further reading are given on page 14. For students who are not seeking accreditation, targets that are expressed primarily in the form of progress towards accreditation or the underpinning processes that will help students achieve accreditation are clearly not appropriate.

What target setting models are available?

Essentially, there are three models for target setting:

- quantitative
- qualitative
- combined.

Quantitative approaches

A-levels and Scottish Highers

The best known quantitative approach in England and Wales is associated with A-levels and there is a growing literature of large-scale research projects, discussions of methods, case studies and how-to-do-it guides (see page 14).

The experience in England is paralleled in Scotland, where correlations between student performance in Standards and Highers have been found to be higher than those between GCSEs and A-levels (Sparkes 1999).

The use of value added approaches in A-levels is becoming the norm for school sixth forms and colleges. The extension of this approach to vocational qualifications has been much slower, as discussed below.

Target setting and value added in GNVQs

The Learning and Skills Development Agency has been exploring value added in GNVQs for several years (Barnard and Dixon 1998). The Agency, with the co-operation of the FEFC has carried out the first extensive analysis of data based on English college student records (the Individualised Student Record), which will be published in early 2001 (Martinez 2001).

The key messages from this research are that:

- average GCSE point scores correlate more strongly with GNVQ outcomes than the other GCSE input measures that were tested (e.g. total point scores or scores for English or maths alone)
- the correlation between GCSEs and GNVQs is much less strong than between GCSEs and A-levels (in the first case it is approximately 0.3, but for A-levels it is approximately 0.7)
- relatively weak correlations between English or maths and GNVQ outcomes offer little support for the assertion that, for example, GCSE Maths is an essential prerequisite for success in the more technical GNVQs
- contrary to expectations, previous GNVQ grades do not seem to provide a better predictor for GNVQ outcomes than average GCSE point scores
- GNVQ outcomes in art and design correlate less well with average GCSE point scores, compared with other GNVQ subjects
- correlations between GCSE average point scores and GNVQ Art and Design are sufficiently strong to inform the creation of target minimum grades for GNVQ Art and Design students.

Table 1 shows the correlations between average GCSE point scores and GNVQ outcomes at Advanced level. The implications of this data are that:

- students with an average GCSE point score of between 3.50 and 4.49 (i.e. an average GCSE grade of D) should have had about as much chance of obtaining a merit as a pass
- two-thirds of students with an average GCSE point score of between 4.50 and 5.49 (i.e. an average GCSE grade of C) should have been aiming at a merit or distinction
- the majority of students with an average GCSE point score of between 5.50 and 6.49 (i.e. an average GCSE grade of B) should have been aiming at a merit or distinction, with a more or less equal chance of achieving either.

Given that the minimum entry requirements for GNVQs has usually been set at four GCSE passes at grade C or above, there is some suggestion that many GNVQ students have not been performing as well as they might. Runshaw College found that individual targets for students improved achievement significantly (James 2000).

TABLE 1
Average GCSE point scores and GNVQ outcomes at Advanced level for 16–18 year olds*

Average GCSE point score**	Fail		Pass		Merit		Distinction	
	No.	%	No.	%	No.	%	No.	%
3.50–4.49	263	8	1390	43	1347	41	267	8
4.50–5.49	193	5	1332	32	1883	46	700	17
5.50–6.49	31	3	184	18	395	39	413	40

* Derived from the 1996/97 Individualised Student Record: the analysis includes only students whose GNVQ grade is recorded and who have one or more GCSE scores recorded. Students were aged 16–18 at the beginning of the academic year; older students are not included. These figures include all GNVQ programme areas except art and design. The art and design figures are similar but with slightly higher levels of GNVQ attainment for the same GCSE scores.

** The point scores have been banded for ease of presentation. Scores have been calculated in the conventional way: A*=8, A=7, B=6, C=5, D=4, E=3, F=2, G=1.

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Runshaw college case study

- All Advanced level GNVQ students were given a target GNVQ grade based on their average GCSE point score and/or prior attainment at Intermediate level GNVQ.
- The college restructured tutoring and some teaching strategies around the new systems for setting targets and monitoring progress.
- Clear roles were developed for teachers, tutors, managers and support-staff within the new target setting arrangements.
- The overall pass rate increased over 2 years from 95 to 98%; the proportion of students obtaining merits increased from 27 to 43% and the proportion achieving distinctions from 5 to 37%.
- In the light of this experience, grade boundaries for average GCSE point scores were recalculated and lowered to set more challenging targets for students. These grade boundaries are lower for merits and distinctions than those suggested in Table 1.

TABLE 2
Suggested minimum target grades for vocational A-levels for 16–18 year olds*

Average GCSE point score**	Minimum target grade for vocational A-level
3.50–4.49	50% to achieve grade E; 50% to achieve grade D or better
4.50–5.49	30% to achieve grade E; 50% to achieve grades D or C; 20% to achieve grades B or A
5.50 and above	50% to achieve grades D or C; 50% to achieve grades B or A

* Aged 16–18 at the beginning of the academic year; older students are not included.

** The point scores have been banded for ease of presentation. Scores have been calculated in the conventional way: A*=8, A=7, B=6, C=5, D=4, E=3, F=2, G=1.

Setting targets for vocational A-levels

It will not be possible to set targets with great certainty. The move from three GNVQ to five vocational A-level grades is unprecedented and we will need to build up experience over the next few years. It is possible, however, to make estimates based on the following assumptions:

- grades A and B will correspond with the previous distinction
- grades C and D will correspond with the previous merit
- grade E will correspond with the previous pass.

Using these assumptions, it is possible to set minimum target grades (see Table 2).

It must be emphasised that these minimum grades are based on educated guesswork, and discussions with students and parents will need to stress this point. By implication, and at least until we have more experience of the new system of grades, it will be necessary to keep targets under close review and change them for individual students in the light of their progress.

Setting minimum targets for other qualifications

Qualifications that are not graded have much less scope for formal value added methods. On the other hand, the evidence reviewed above suggests that it is useful to set targets and review progress against such targets for:

- target dates for the completion of qualifications and units
- sequencing of units.

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Quantitative approaches using other input measures

Experimental work has been done in colleges to develop input measures other than average GCSE point scores that can be used to create minimum targets. Measures that have been used include:

- prior attainment in GNVQs
- scores derived from assessments of key skills at the beginning of courses
- scores derived from self-devised or proprietary intelligence or capability tests
- assessment of student performance in respect of underlying processes.

To date, and for a variety of reasons, none of these approaches has been developed to the point where they can provide a firm statistical underpinning for a quantitative approach to target setting.

Counter-intuitively, prior attainment in GNVQs seems to have a lower predictive power for GNVQ grades than average GCSE point scores (Martinez 2001).

Pilots using the other input measures listed above are too limited or too recent to generate reasonably reliable quantitative targets. This is not to say that it will never be possible to use different input measures to set targets. It is rather to acknowledge that these methods are new and experimental and will require time to develop, as discussed in the following section on qualitative approaches.

Qualitative approaches

A variety of different qualitative approaches have been piloted in English colleges (Bailey 2000; Gill and Carpentier-Jones 2000; Burton 1999; Sutton Coldfield case study at www.rqa.org.uk). They have the following features in common:

- a focus on student performance processes that may be said to underpin learning (attendance, submission of work to deadlines, punctuality, time management, take up of learning support etc).
- linked systems for tutoring and target setting
- ongoing monitoring of, and support for, student progress through tutoring.

Features which occur in some but not all of the approaches include:

- the systematic collection of data in the expectation that, over time, relationships can be identified between the qualitative criteria and qualification outcomes
- flexibility to allow different curriculum areas to make adjustments to target setting models to suit their particular students or subjects
- the encouragement of students to assess their own progress against the performance targets.

Three different college models are described here to illustrate these processes.

As part of its Unified Tutorial System, Hartlepool College has introduced an indicative grade for overall progress that is determined by the personal tutor at the conclusion of the termly one-to-one review meeting with students. The grades are:

A excellent progress against all targets
B generally good progress against all targets
C generally satisfactory progress
D good progress but with difficulties in some subjects
E cause for concern: attendance hindering progress
F cause for concern: other factors hindering progress
G serious concern: attendance
H serious concern: other factors.

Any of the 'concern' grades (E–H from the above list) require students to agree a specific action plan with their tutor (Martinez 2000).

Sutton Coldfield College has developed a rather more detailed system, the Student Tracking and Achievement Record (STAR). The intention here is to engage students in a review and discussion of their progress, to look at progress from a holistic point of view and to get students to take more responsibility for their progress (Sutton Coldfield case study at www.rqa.org.uk).

FIGURE 1
The self assessment instrument for GNVQ programmes

SUCCESSFUL STUDENT PROFILE

(Managing your time and making the best use of your learning resources)

Date:_____

STUDENT NAME:_____

TUTOR NAME:_____

	Weekly attendance for all classes	Punctuality for all classes	Work submitted to deadlines	Private study per week	College LRC private study per week	Maths additional support (if Applicable)	English-Additional support (if applicable)	Part-time employment (hours per week)	Social life (evenings out) per week	Hours spent in amenity block per day	Effective time management plan in place
Achieve	100%	100%		12	6	100%	100%	3	1	1/2	
	95%	95%		10	5	95%	95%	6	2	1	
	90%	90%	100%	8	4	90%	90%	9	3	1 1/4	Yes
Non Achieve			75%	6	3	12	4	4	1		
			50%	5	2	18	5	5	2		
				4	1	24	6	6	3		No
				3	0	26	7	4	4		

Minimum Target: 11 categories of achievement Student's Result:__categories of achievement

*** On target**
*** Close to target**
*** Off target**
*** Delete as approp.**

Source: Sutton Coldfield College

Tutors at Sutton Coldfield have extended the process that has taken place in many colleges of identifying the characteristics of 'at risk' students. At Sutton Coldfield, this process now includes the identification of characteristics of successful students. Characteristics of success and failure have been turned into a self-assessment instrument for use by students. The instrument can be adapted to meet the needs of students on different programmes.

Students undertake a first self assessment using the instrument within the first five weeks of their course and then at termly or twice-termly intervals thereafter. They evaluate their own performance against criteria such as attendance, the creation of a time management plan, hours of part-time work per week, hours of independent study per week etc. The tutor validates the student's self assessment by reference to registers etc and helps the student to review progress and set targets.

Soundwell College has developed a qualitative system, which is intended to become more quantitative over time. Here, students negotiate targets that are based on a variety of behaviours: effort, punctuality, organisation, attendance, progress etc. Target and actual grades are being recorded and the college anticipates that, as it gathers data over time, the process of target setting will become more accurate and hence more amenable to quantification (Bailey 2000).

A number of other colleges are adopting an approach that is broadly similar to one or other of these three models, including: Stoke on Trent, South Thames, North East Worcestershire and Norfolk College of Arts and Technology. Although these approaches are relatively new, there is a high degree of consensus between the colleges:

- students value the close and detailed monitoring of their progress
- such monitoring helps to foster a particular staff–student relationship and ensures that remedial action is identified when progress is shown to be falling below target
- target grades motivate students
- teachers feel that the target setting and review processes give a focused and increased degree of rigour to tutoring
- this type of formative approach helps to improve attendance, retention and achievement.

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Combined approaches

Combined approaches to target setting include both quantitative and qualitative approaches. There are two main models currently in use:

- implicit
- integrated.

Implicit approaches

Most of the quantitative approaches identified above contain an implicit combination of approaches. This arises naturally from the nature of target setting and the review of student progress against targets. As qualitative approaches focus on underpinning processes, when teachers and students begin to examine the 'how and why' of student progress they necessarily examine issues of attendance, time management, the submission of work to deadlines, development of study skills etc. Such discussions form the basis of tutorials and need little discussion here. The approach is implicit to the extent that the discussion of underlying processes is not formalised and does not take place within an explicit framework of targets.

Integrated approaches

A fully integrated approach is in place at Knowsley Community College. Students are placed into one of three bands, depending on a mixture of evidence derived from:

- prior academic achievement (e.g. GCSEs)
- an initial diagnostic assignment
- the first piece of assessed work
- an additional criterion determined by the programme team.

The placing of students within a band is then used to inform target setting and provide a reasonably transparent framework for tutor–student interaction and for monitoring student progress. The college has created a more general framework of quality standards and procedures for this approach (Gill and Carpentier-Jones 2000), which is being adopted and adapted in other colleges (e.g. Burton 1999).

Where targets are being set based on a combination of quantitative and qualitative data, there is a tension between short-term simplicity and long-term robustness and accuracy. Given the benefits of this type of tutor–student dialogue, there is some pressure to introduce target setting as quickly as possible and with minimum administration.

Without detailed record keeping, however, it will not be possible to monitor the relationships between different variables and hence to improve the accuracy of targets over time (e.g. by varying the weighting given to different measures, or by improving the mix of variables). On the other hand, the search for a perfect administrative system should not lead to an indefinite postponement of the practice. The most pragmatic solution would appear to be the most detailed and sophisticated record keeping that is compatible with an institution's current data handling capacity.

Which approach is best for which learners?

In the absence of comparative studies to help answer this question, the generalisations offered below are tentative. The most effective approach to target setting will vary with the type of student and type of programme. For students who can negotiate their qualification, for example some Open College Network accredited programmes, learning contracts would seem to be the most appropriate. These require separate treatment from the target setting processes reviewed here, but suggestions for further reading can be found in the section *Where can I find out more?* (page 14).

For students and trainees where there are no apparent patterns in the relationship between prior attainment (however measured) and qualification outcomes, a qualitative approach that focuses on underpinning processes will be most relevant. Learners in this category might include:

- students on Access courses
- students and trainees on programmes leading to NVQs, technical certificates and professional qualifications
- older students with very diverse prior attainment
- learners pursuing lower level qualifications at pre-entry, entry and foundation levels (with no or very diverse prior attainment).

Where there are meaningful but weak correlations between prior attainment and qualification outcomes, a combined approach is likely to be most effective. The largest group of students in this category will be pursuing vocational A-levels. They will be joined by National Certificate and Diploma students if Edexcel extends the vocational A-level grading structure to these qualifications.

Where there is a high correlation between prior attainment and qualification outcomes (e.g. A-levels, Scottish Highers) quantitative approaches will be most relevant. Quantitative approaches involve the consideration of underpinning learning and behavioural processes, and there is an argument for formalising this to create, in effect, a combined approach. On the other hand, given the complexities and uncertainties around the introduction of Curriculum 2000, changes in this direction might well be delayed until the new system has settled down.

Key features of successful target setting

General process issues around curriculum change (support from senior managers, staff development, good communications around the change process, etc) have been reported extensively elsewhere (Leithwood *et al.* 1999; Middlewood and Lumby 1998; Visscher 1999; Fullan 1999). Other features of successful target setting are identified below, drawn mainly from case study evidence.

Implementation

- Large-scale initiatives will need to be driven by senior managers and will need a dedicated co-ordinator.
- Students need to retain ownership of their action plans and these need to be reviewed at least once per term.
- Data concerning prior attainment (GCSEs, Standard Grades in Scotland) is sometimes under-recorded by schools, so institutions setting targets may need to do their own data collection.
- Staff development is important both to support the initial implementation of target setting, and subsequently to ensure that good practice is shared internally and can be identified and brought back from external sources.
- Target setting requires hands-on management that celebrates students' success and is prepared to challenge existing practices.
- Systems and procedures are required to underpin all aspects of target setting for managers, tutors, teachers and trainers.
- Governors should be committed to target setting and monitor its implementation.

Learner motivation

- The emphasis should always be on minimum targets that learners should be able to achieve and may be inspired to exceed.
- Even the most reliable predictions are not ordained by fate! Targets are based on past performance that cannot be changed, but future performance can. Chances graphs show what students can achieve if they apply themselves.
- Targets will need to be kept under review and raised in the light of student progress, modular assessments etc.
- Where quantitative approaches can be employed, learners need to be given their targets as early as possible.
- As far as learners are concerned, the focus is not the comparison between their individual performance and that of the group or class, but rather on their own progress and what steps they need to take to achieve their intended goal.
- Learners are generally interested in predicted grades; learners with poor or moderate predicted grades tend to be reassured and stimulated, rather than put off or demotivated.
- Targets need to be communicated sensitively; if the message received is 'you're only an E', the effect will be the opposite of that intended.
- Targets and progress towards such targets provide the basis for a very focused exchange with learners and their parents.
- Realistic targets are much more useful to learners than 'encouragement' targets.
- Parents need to be made aware of target setting processes at the earliest opportunity.

Teaching and tutoring

- All targets, including targets based on the most robust quantitative approaches, are provisional and tentative and need to be kept under review.
- Although target setting is premised on data, one of its most important aspects is the relationship between the learner and their personal tutor who knows them, champions their interest and liaises closely with subject teachers and trainers.
- Formative value added methods challenge tutors to become diagnosticians: to determine how learners can develop and demonstrate their skills and to identify the specific actions that individual learners need to take.
- Targets help to identify students at risk of under-performing in a specific subject or in all subjects.
- Targets encourage a reflective approach: using targets effectively involves ongoing reflection about the appropriateness of teaching and training strategies and curriculum design.

Management

- Coherent and distinctive roles need to be specified for tutors, teachers and trainers, administrators and managers.
- Where tutoring and teaching are performed by different people, effective target setting relies on effective communication between the different roles.
- Target setting associated with quantitative approaches should inform periodic reviews of entry criteria.
- Where they are associated with value added calculations, targets can aid teacher understanding and provide the opportunity to learn from successful practice, and identify and address problems.
- Target setting as part of formative assessment systems also provides a practical and pragmatic focus for institutional research.
- The principles, procedures and practice of target setting need to be supported and reinforced through staff meetings and continuing professional development.
- For target setting to work effectively, sufficient time needs to be allocated to tutoring.
- Managers should anticipate and be prepared for the fact that target setting will highlight questions about teaching, tutoring, learning support and curriculum design.

Quantitative approaches

- Tutors need support too! Management information systems can make tutors' work easier by generating quantitative targets and chances graphs for students and can facilitate record keeping.
- There are arguments for and against using targets derived from year-on-year analyses of an institution's own data, and for deriving targets from benchmarking consortia. Both seem to work well in different contexts.
- Quantitative approaches place a premium on the collection of complete and accurate data on prior attainment and also on outcomes, including grades achieved and time taken to achieve ungraded qualifications.
- Keep it simple. More complex target setting procedures which, for example calculate values for the prior attainment of qualifications other than GCSEs (or Scottish Standards), for partial attainment or for the attainment of qualifications additional to learners' main learning goals, do not appear to generate better correlations or more accurate targets.

Qualitative and combined approaches

- Both qualitative and quantitative approaches depend on rigorous systems to track the progress of learners.
- The basis on which qualitative targets are being set should be transparent and informed by the professional judgements of teachers, tutors and trainers.
- Students should be encouraged to self-assess their progress against qualitative targets for underlying processes (attendance, punctuality, completion of work to deadlines, hours of private study etc).
- There is a strong argument in combined approaches for keeping detailed records. In the longer term, this should enable more reliable and accurate targets to be set by revising the weighting and mix of baseline variables.

Learning points from implementation

The following learning points form part of a case study in implementing target setting at Winstanley College (published at www.rqa.org.uk).

Winstanley College case study: learning points

It has become apparent that every principle and procedure wrapped up with Minimum Acceptable Grades (MAG) has to be reinforced through staff meetings and training sessions. The idea of personal tutors acting as advocates of their tutees, insisting that they receive a good deal at all times from subject teachers, has the potential for friction; the provision of meaningful and effective action plans by subject teachers which genuinely spur improvement is often far from straightforward; a readiness to evaluate the appropriateness for all students of long-favoured teaching methods requires flexibility, openness and an element of bravery; a commitment to retaining and improving the performance of relatively difficult or poorly motivated students is part of a broader cultural change.

...Given that every student enrolled [at Winstanley College] has achieved a standard at GCSE which virtually all colleges in the land would regard as a realistic springboard for A-level or GNVQ, it is incumbent upon staff to see that nothing goes awry thereafter. That said, zero tolerance of post-1 November drop-out (unless the case for movement from one programme to another is cast iron) at a time when the average class size at Winstanley is at its highest ever requires teachers sometimes to go against what might seem to be in their own best interests. Such truths need to be acknowledged and debated and coping strategies shared. Teachers are rightly sceptical of miracle cures to improve achievement and retention. I would never claim that MAG-setting alone could contribute much to that desired outcome. All the other monitoring, reviewing, challenging, analysing and supporting mechanisms need to be in place. The fact remains, however, that well over 1300 students at Winstanley College are currently working to exceed a set of MAGs, which have been shared also, with their parents, teachers and personal tutors. Under-attainers are on action plans; 'over'-achievers are urged to adopt more challenging targets (usually their UCAS predicted grades if above MAG). All staff understand the concept, all key systems are designed to complement it and (over) attainment of MAG is a key performance indicator for everyone concerned with the college. A shared whole-college resolve towards the realisation of a simply defined objective, mobilising all relevant procedures and personnel in pursuit of that objective – such is the philosophy of MAG with optimisation of retention and achievement of the desired outcome.

Where can I find out more?

This is a guide to further resources. The English resources will be of limited use because of the changes associated with Curriculum 2000.

How-to-do-it guides

Spours and Hodgson (1996) provide a step-by-step guide to target setting as part of a formative approach to value added in A-levels. They also make a number of practical suggestions for the extension of the approach to GNVQs.

Greenhead College has produced a widely distributed guide to the value added model (Conway 1997).

The Scottish Executive's guide focuses primarily on the use of value added measures to compare institutional and departmental performance, and includes a useful section on tutoring (Scottish Executive 2000).

Case studies

In England, the DfEE is funding action research projects in colleges to improve student achievement and retention as part of the Learning and Skills Development Agency's raising quality and achievement (RQA) programme. A number of case studies have target setting as their focus and provide useful information about the design of systems and practicalities of implementation. These case studies can be viewed on the *Development Projects* section of the RQA website (www.rqa.org.uk).

Sixth form colleges that have produced case studies focusing on target setting and/or formative assessment include: Bolton, Carmel, Greenhead, Richard Huish, Shrewsbury, Sir George Monoux, Stoke on Trent and Winstanley. FE and tertiary colleges which have produced similar case studies include Accrington and Rossendale, Doncaster, Exeter, Middlesbrough, North Hertfordshire and Sutton Coldfield.

Spours (1996) has edited some slightly older case studies.

Target setting in A-levels

With the exception of reports by Spours and Hodgson (1996) and Conway (1997), the literature is dominated by the discussion of value added for the purpose of institutional comparisons, rather than the use of target setting to support formative approaches to value added.

Some of the texts provide useful background reading on the complexities of the issues (e.g. DfEE 1995). Saunders (1999) presents a critical overview of the whole field that addresses some of the controversial issues about using value added to measure institutional performance.

Fitz-Gibbon and Vincent (1997) argue persuasively that A-levels are not all of equal difficulty and that targets based on value added data need to be calculated separately for each subject. Yang and Woodhouse (2000) provide a stimulating analysis of value added trends over time, by gender and by type of educational institutions.

Detailed statistical bulletins showing value added in A-levels by subject are available at the DfEE website (www.dfee.gov.uk/statistics).

Scottish Highers

The recent publication by the Scottish Executive (2000) is an accessible guide about target setting for Scottish Highers. Also available on CD-ROM, it contains detailed guidance on the interpretation of value added performance measures, as well as guidance for tutors.

Sparkes (1999) argues forcefully for considerable caution in making institutional comparisons.

Target setting in other qualifications

Compared with A-levels and excepting the case studies referred to here, there is relatively little published literature on target setting for other qualifications.

The Learning and Skills Development Agency is publishing a research report in 2001 that focuses primarily on GNVQs (Martinez 2001). This report includes a survey of practice in English colleges and discusses the relationship between prior attainment in GCSEs and GNVQ outcomes. An interim report that was presented at the September 2000 conference of the British Educational Research Association (BERA) can be found at www.leeds.ac.uk/educol

There is a growing body of literature on the creation of learning contracts – targets for negotiated programmes of learning. Accessible descriptions of this approach have been published by Brown and Baume (1992), Stephenson and Laycock (1993), and Brennan and Little (1996).

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Comments

If you have any comments about this report or would like to contribute to ongoing work, please contact **Dr Paul Martinez**, Development Adviser, Learning and Skills Development Agency, Robins Wood House, Robins Wood Road, Aspley, Nottingham NG8 3NH.
Tel 0115 929 9121
Fax 0115 929 3505
pmartine@LSagency.co.uk

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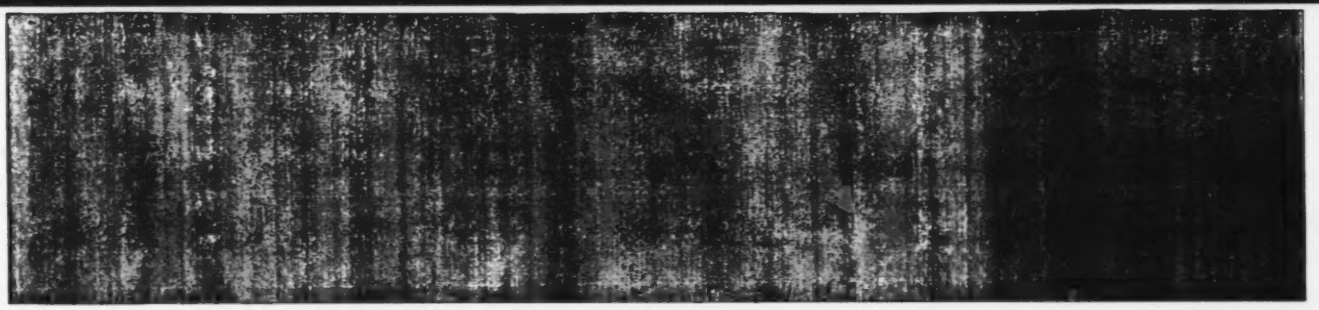

Who is this report for?

- learners
- teachers, tutors and trainers
- the parents of younger learners
- curriculum managers
- institutional managers
- national agencies.

What is it about?

This report reviews the process of setting targets for individual students. It argues for the extension of current practice and provides:

- a summary of research findings
- a description of different practical models
- guidelines for successful practice
- suggestions for further reading.

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